Revision 8
January 2008

ECOLOGY AND ENVIRONMENT, INC.

SITE-SPECIFIC HEALTH AND SAFETY PLAN

Project: Grey Eagle Mine

Project No.: 002693.2151.01RA

TDD/PAN No.: TO-02-09-11-08-0001

Project Location: Siskiyou County, California (41º 51' 27" latitude, 123º 23' 54" longitude)

Proposed Date of Field Activities: August - December 2011

Project Director: Cindy McLeod

Project Manager: Derek Ormerod

Prepared by: Kate Villars Date Prepared: September 6, 2011

Approved by: _____ Date Approved: _____

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1. INTRODUCTION

1.1 POLICY

It is E & E's policy to ensure the health and safety of its employees, the public, and the environment during the performance of work it conducts. This site-specific health and safety plan (SHASP) establishes the procedures and requirements to ensure the health and safety of E & E employees for the above-named project. E & E's overall safety and health program is described in *Corporate Health and Safety Program* (CHSP). After reading this plan, applicable E & E employees shall read and sign E & E's Site-Specific Health and Safety Plan Acceptance form.

This SHASP has been developed for the sole use of E & E employees and is not intended for use by firms not participating in E & E's training and health and safety programs. Subcontractors are responsible for developing and providing their own safety plans.

This SHASP has been prepared to meet the following applicable regulatory requirements and guidance:

Applicable Regulation/Guidance
29 CFR 1910.120, Hazardous Waste Operations and Emergency Response (HAZWOPER)
Other:

1.2 SCOPE OF WORK

Description of Work: Grey Eagle mine is located in Klamath National Forest approximately 5 miles north of the town of Happy Camp, California. START previously conducted assessment and oversight work to grade, cap, and reinforce mine tailing piles on site. Recent observations suggest that metals may still be entering Indian Creek from ground water in the tailings pile immediately adjacent to the creek. START will conduct sampling of soil, surface water, and groundwater seeps in the stream bank to characterize potential metals contamination.

Equipment/Supplies: Attachment 1 contains a checklist of equipment and supplies that will be needed for this work.

The following is a description of each numbered task:

Task Number	Task Description
1	Sampling – Surface Water
2	Sampling – Groundwater seeps from stream bank and associated precipitated salts
3	Sampling – soil
4	Decontamination
5	Site Documentation – GPS, photographic and written

1.3 SITE DESCRIPTION

Site Map: A site map or sketch is attached at the end of this plan.

Site History/Description (see project work plan for detailed description): Grey Eagle mine is located in Klamath National Forest, five miles north of Happy Camp, CA. The mine is currently inactive, but tailings piles adjacent to Indian Creek contain unoxidized heavy metals and, despite capping in 1998, are suspected of negatively impacting water quality in the creek. A 1998 START assessment demonstrated that groundwater is present at depth in the tailings pile and that only the uppermost surface of the tailings was oxidized. Recent observations suggest heavy metals may be entering Indian Creek and creating acidic conditions through oxidation.

Is the site currently in operation? ☐ Yes ☒ No

Locations of Contaminants/Wastes: Mine wastes with documented elevated levels of arsenic, copper, and mercury are located in the capped tailings pile adjacent to Indian Creek. Sampling will be conducted on surface water in Indian Creek, ground water seeps on the creek bank, precipitated salts from these seeps, and soils in the area of the tailings adjacent to the creek to characterize the suspected migration of contaminants into surface water.

Types and Characteristics of Contaminants/Wastes:

☒ Liquid	☒ Solid	☒ Sludge	☐ Gas/Vapor
☐ Flammable/Ignitable	☐ Volatile	☐ Corrosive	☐ Acutely Toxic
☐ Explosive	☐ Reactive	☒ Carcinogenic	☐ Radioactive
☐ Medical/Pathogenic	Other:		

2. ORGANIZATION AND RESPONSIBILITIES

E & E team personnel shall have on-site responsibilities as described in E & E's standard operating procedure (SOP) for Site Entry Procedures (GENTECH 2.2). The project team, including qualified alternates, is identified below.

Name	Site Role/Responsibility
Derek Ormerod	Project/Task Manager, Site Safety Officer
Kate Villars	Field Support

3. TRAINING

Prior to work, E & E team personnel shall have received training as indicated below. As applicable, personnel shall have read the project work plan, sampling and analysis plan, and/or quality assurance project plan prior to project work.

Training	Required
40-Hour OSHA HAZWOPER Initial Training and Annual Refresher (29 CFR 1910.120)	X
Annual First Aid/CPR	X
Hazard Communication (29 CFR 1910.1200)	X
40-Hour Radiation Protection Procedures and Investigative Methods	
8-Hour General Radiation Health and Safety	
Radiation Refresher	
DOT and Biannual Refresher	
Other: _____	

4. MEDICAL SURVEILLANCE

4.1 MEDICAL SURVEILLANCE PROGRAM

E & E field personnel shall actively participate in E & E's medical surveillance program as described in the CHSP and shall have received, within the past year, an appropriate physical examination and health rating.

E & E's health and safety record (HSR) form will be maintained on site by each E & E employee for the duration of his or her work. E & E employees should inform the site safety officer (SSO) of any allergies, medical conditions, or similar situations that are relevant to the safe conduct of the work to which this SHASP applies.

Is there a concern for radiation at the site? ☐ Yes ☒ No

If no, go to 5.1.

4.2 RADIATION EXPOSURE

4.2.1 External Dosimetry

Thermoluminescent Dosimeter (TLD) Badges: TLD badges are to be worn by all E & E field personnel.

Pocket Dosimeters: _____

_____

Other: _____

_____

4.2.2 Internal Dosimetry

☐ Whole body count ☐ Bioassay ☐ Other

Requirements: _____

_____

4.2.3 Radiation Dose

Dose Limits: E & E's radiation dose limits are stated in the CHSP. Implementation of these dose limits may be designated on a

site specific basis.

Site-Specific Dose Limits:

ALARA Policy: Radiation doses to E & E personnel shall be maintained as low as reasonably achievable (ALARA), taking into account the work objective, state of technology available, economics of improvements in dose reduction with respect to overall health and safety, and other societal and socioeconomic considerations.

5. SITE CONTROL

5.1 SITE LAYOUT AND WORK ZONES

Site Work Zones: Refer to the map or site sketch, which will be produced on site, for designated work zones.

Site Access Requirements and Special Considerations: Grey Eagle Mine Tailings Repository can be accessed by driving approximately 5 miles north of Happy Camp, CA on Indian Creek Road and turning left on a private driveway approximately 100 feet before Luther Gulch Road. Collection of some sediment and water samples may require wading in Indian Creek if water conditions are safe.

Illumination Requirements: Work will be conducted during daylight hours. In the event that nighttime work is required, proper illumination of working areas is required.

Sanitary Facilities (e.g., toilet, shower, potable water): The nearest sanitary facilities will be located on the way to the site. Bottled water will be brought to site.

On-Site Communications: Person to person; cell phones if coverage is available

Other Site-Control Requirements:

5.2 SAFE WORK PRACTICES

Daily Safety Meeting: A daily safety meeting will be conducted for all E & E personnel and documented on the Daily Safety Meeting Record form or in the field logbook. The information and data obtained from applicable site characterization and analysis will be addressed in the safety meetings and also used to update this HASP, as necessary.

Work Limitations: Work shall be limited to a maximum of 12 hours per day. If 12 consecutive days are worked, at least one day off shall be provided before work is resumed. Work will be conducted in daylight hours unless prior approval is obtained and the illumination requirements in 29 CFR 1910.120(m) are satisfied.

Weather Limitations: Work shall not be conducted during electrical storms. Work conducted in other inclement weather (e.g., rain, snow) will be approved by project management and the regional safety coordinator or designee.

Other Work Limitations:

Buddy System: Field work will be conducted in pairs of team members according to the buddy system.

Line of Sight: Each field team member shall remain in the line of sight and within verbal communication of at least one other team member.

Eating, Drinking, and Smoking: Eating, drinking, smoking, and the use of tobacco products shall be prohibited in the exclusion and contamination reduction areas, at a minimum, and shall only be permitted in designated areas.

Contamination Avoidance: Field personnel shall avoid unnecessary contamination of personnel, equipment, and materials to the extent practicable.

Sample Handling: Protective gloves of a type designated in Section 7 will be worn when containerized samples are handled for labeling, packaging, transportation, and other purposes.

Other Safe Work Practices: Personal floatation devices (PFDs) will be worn by E&E personnel at all times when wading or collecting samples along the stream bank.

6. HAZARD EVALUATION AND CONTROL

6.1 PHYSICAL HAZARD EVALUATION AND CONTROL

Potential physical hazards and their applicable control measures are described in the following table for each task.

Hazard	Task Number	Hazard Control Measures
Biological (flora, fauna, etc.)	1-5	■ Potential hazard: poison oak, insects (ticks, mosquitoes), animals (bears, snakes, etc.) ■ Establish site-specific procedures for working around identified hazards. ■ Other:
Cold Stress	1-5	■ Provide warm break area and adequate breaks. ■ Provide warm noncaffeinated beverages. ■ Promote cold stress awareness. ■ See *Cold Stress Prevention and Treatment* (attached at the end of this plan if cold stress is a potential hazard).

Hazard	Task Number	Hazard Control Measures
Compressed Gas Cylinders		■ Use caution when moving or storing cylinders. ■ A cylinder is a projectile hazard if it is damaged or its neck is broken. ■ Store cylinders upright and secure them by chains or other means. ■ Other:
Confined Space		■ Ensure compliance with 29 CFR 1910.146. ■ See SOP for Confined Space Entry. Additional documentation is required. ■ Other: Confined spaces may be present within vessels that require assessment/sampling.
Drilling		■ See SOP for Health and Safety on Drilling Rig Operations. Additional documentation may be required. ■ Landfill caps will not be penetrated without prior discussions with corporate health and safety staff. ■ Other:
Drums and Containers		■ Ensure compliance with 29 CFR 1910.120(j). ■ Consider unlabeled drums or containers to contain hazardous substances and handle accordingly until the contents are identified. ■ Inspect drums or containers and assure integrity prior to handling. ■ Move drums or containers only as necessary; use caution and warn nearby personnel of potential hazards. ■ Open, sample, and/or move drums or containers in accordance with established procedures; use approved drum/container-handling equipment. ■ Other:
Electrical		■ Ensure compliance with 29 CFR 1910 Subparts J and S. ■ Locate and mark energized lines. ■ De-energize lines as necessary. ■ Ground all electrical circuits. ■ Guard or isolate temporary wiring to prevent accidental contact. ■ Evaluate potential areas of high moisture or standing water and define special electrical needs. ■ Other:
Excavation and Trenching		■ Ensure that excavations comply with and personnel are informed of the requirements of 29 CFR 1926 Subpart P. ■ Ensure that any required sloping or shoring systems are approved as per 29 CFR 1926 Subpart P. ■ Identify special personal protective equipment (PPE) (see Section 7) and monitoring (see Section 8) needs if personnel are required to enter approved excavated areas or trenches. ■ Maintain line of sight between equipment operators and personnel in excavations/trenches. Such personnel are prohibited from working in close proximity to operating machinery. ■ Suspend or shut down operations at signs of cave in, excessive water, defective shoring, changing weather, or unacceptable monitoring results.

Hazard	Task Number	Hazard Control Measures
		■ Other:
Fire and Explosion		■ Inform personnel of the location(s) of potential fire/explosion hazards. ■ Establish site-specific procedures for working around flammables. ■ Ensure that appropriate fire suppression equipment and systems are available and in good working order. ■ Define requirements for intrinsically safe equipment. ■ Identify special monitoring needs (see Section 8). ■ Remove ignition sources from flammable atmospheres. ■ Coordinate with local fire-fighting groups regarding potential fire/explosion situations. ■ Establish contingency plans and review daily with team members. ■ Other:
Heat Stress	1-5	■ Provide cool break area and adequate breaks. ■ Provide cool noncaffeinated beverages. ■ Promote heat stress awareness. ■ Use active cooling devices (e.g., cooling vests) where specified. ■ See *Heat Stress Prevention and Treatment* (attached at the end of this plan if heat stress is a potential hazard).
Heavy Equipment Operation		■ Define equipment routes, traffic patterns, and site-specific safety measures. ■ Ensure that operators are properly trained and equipment has been properly inspected and maintained. Verify back-up alarms. ■ Ensure that ground spotters are assigned and informed of proper hand signals and communication protocols. ■ Identify special PPE (Section 7) and monitoring (Section 8) needs. ■ Ensure that field personnel do not work in close proximity to operating equipment. ■ Ensure that lifting capacities, load limits, etc., are not exceeded. ■ Other:
Heights (Scaffolding, Ladders, etc.)		■ Ensure compliance with applicable subparts of 29 CFR 1910. ■ Identify special PPE needs (e.g., lanyards, safety nets, etc.) ■ Other:
Noise		■ Establish noise level standards for on-site equipment/operations. ■ Inform personnel of hearing protection requirements (Section 7). ■ Define site-specific requirements for noise monitoring (Section 8). ■ Other:
Overhead Obstructions		■ Wear hard hat. ■ Other: Hard hats required in the vicinity of heavy equipment.
Power Tools		■ Ensure compliance with 29 CFR 1910 Subpart P. ■ Other:
Sunburn	1-5	■ Apply sunscreen.

Hazard	Task Number	Hazard Control Measures
		■ Wear hats/caps and long sleeves. ■ Other:
Utility Lines		■ Identify/locate existing utilities prior to work. ■ Ensure that overhead utility lines are at least 25 feet away from project activities. ■ Contact utilities to confirm locations, as necessary. ■ Other:
Weather Extremes	1-5	■ Potential hazards: Cold, wind, snow ■ Establish site-specific contingencies for severe weather situations. ■ Provide for frequent weather broadcasts. ■ Weatherize safety gear, as necessary (e.g., ensure eye wash units cannot freeze, etc.). ■ Identify special PPE (Section 7) needs. ■ Discontinue work during severe weather. ■ Other:
Other: Water Safety	1-5	■ If the creek is in flood stage, PFDs must be worn by all persons wading in water and by all land-based personnel working within 10-feet of the shore. ■ Do NOT wade in flowing water when the product of depth (in feet) and velocity (in feet per second) equals 12 or greater. Application of this rule varies among individuals according to their weight and stature, and to the condition of the streambed.

6.2 CHEMICAL HAZARD EVALUATION AND CONTROL

6.2.1 Chemical Hazard Evaluation

Potential chemical hazards are described by task number in Table 6-1. Hazard Evaluation Sheets for major known contaminants are attached at the end of this plan.

6.2.2 Chemical Hazard Control

An appropriate combination of engineering/administrative controls, work practices, and PPE shall be used to reduce and maintain employee exposures to a level at or below published exposure levels (see Section 6.2.1).

Applicable Engineering/Administrative Control Measures: Support zones will be located upwind/upgradient of contaminated areas.

PPE: See Section 7.

6.3 RADIOLOGICAL HAZARD EVALUATION AND CONTROL

6.3.1 Radiological Hazard Evaluation

Potential radiological hazards are described below by task number. Hazard Evaluation Sheets for major known contaminants are attached at the end of this plan.

Task Number	Radionuclide	DAC (μCi/ml)	Route(s) of Exposure	Major Radiation(s)	Energy(s) (MeV)	Half-Life

6.3.2 Radiological Hazard Control

Engineering/administrative controls and work practices shall be instituted to reduce and maintain employee exposures to a level at or below the permissible exposure/dose limits (see sections 4.2.3 and 6.3.1). Whenever engineering/administrative controls and work practices are not feasible or effective, any reasonable combination of engineering/administrative controls, work practices, and PPE shall be used to reduce and maintain employee exposures to a level at or below permissible exposure/dose limits.

Applicable Engineering/Administrative Control Measures: Radiological hazards are not anticipated.

PPE: See Section 7.

TABLE 6-1

CHEMICAL HAZARD EVALUATION

Task Number	Compound	Exposure Limits (TWA)			Dermal Hazard (Y/N)	Route(s) of Exposure	Acute Symptoms	Odor Threshold/ Description	FID/PID	
		PEL	REL	TLV					Relative Response	Ioniz. Poten. (eV)
1-5	Arsenic *	0.01 mg/m^3 [TWA]	0.002 mg/m^3 [15 min, ceiling]	0.01 mg/m^3	Y	Inhalation, skin absorption, ingestion, skin and/or eye contact	Ulceration of nasal septum, dermatitis, gastrointestinal disturbances, peripheral neuropathy, respiratory irritation, hyperpigmentation of skin	Silver-grey or tin-white, brittle, odorless solid.	NA	NA
1-5	Copper	1 mg/m^3 [TWA]	1 mg/m^3 [TWA]	1 mg/m^3	Y	inhalation, ingestion, skin and/or eye contact	irritation eyes, nose, pharynx; nasal septum perforation; metallic taste; dermatitis	Reddish, lustrous, malleable, odorless solid.	NA	NA
1-5	Lead	TWA 0.050 mg/m^3	TWA (8-hour) 0.050 mg/m^3	TWA 0.050 mg/m^3	Y	inhalation, ingestion, skin and/or eye contact	Lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; irritation eyes; hypertension	A heavy, ductile, soft, gray solid.	NA	NA
1-5	Mercury	Vapor: 0.1 mg/m^3	Vapor: 0.05 mg/m^3 [TWA] 0.1 mg/m^3 [ceiling]	TWA 0.025 mg/m^3	Y	Inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin; cough, chest pain, breathing difficulty, bronchitis, pneumonitis; tremor, insomnia, irritability, indecision, headache, lassitude; stomatitis, salivation; gastrointestinal disturbance	Silver-white, heavy, odorless liquid.	NA	unknown

Note: Use an asterisk (*) to indicate known or suspected carcinogens.
mg/m^3 = milligrams per cubic meter

7. LEVEL OF PROTECTION AND PERSONAL PROTECTIVE EQUIPMENT

7.1 LEVEL OF PROTECTION

The following levels of protection (LOPs) have been selected for each work task based on an evaluation of the potential or known hazards, the routes of potential hazard, and the performance specifications of the PPE. On-site monitoring results and other information obtained from on-site activities will be used to modify these LOPs and the PPE, as necessary, to ensure sufficient personnel protection. The authorized LOP and PPE shall only be changed with the approval of the regional safety coordinator or designee. Level A is not included below because Level A activities, which are performed infrequently, will require special planning and addenda to this SHASP.

Task Number	B	C	D	Modifications Allowed
1			X	
2			X	
3			X	
4			X	
5			X	

Note: Use "X" for initial levels of protection. Use "(X)" to indicate levels of protection that may be used as site conditions warrant.

7.2 PERSONAL PROTECTIVE EQUIPMENT

The PPE selected for each task is indicated below. E & E's PPE program complies with 29 CFR 1910.120 and 29 CFR 1910 Subpart I and is described in detail in the CHSP. Refer to 29 CFR 1910 for the minimum PPE required for each LOP.

PPE	1	2	3	4	5
Full-face APR					
PAPR					
Cartridges:					
P100 and Mersorb					
GMC-P100					
GME-P100					
Other:					
Positive-pressure, full-face SCBA					
Spare air tanks (Grade D air)					
Positive-pressure, full-face, supplied-air system					
Cascade system (Grade D air)					
Manifold system					
5-Minute escape mask					

PPE	1	2	3	4	5
Safety glasses	(X)	(X)	(X)		
Monogoggles					
Coveralls/clothing					
Protective clothing:					
Tyvek					
Saranex					
Other:					
Splash apron					
Inner gloves:					
Cotton					
Nitrile	X	X	X	X	
Latex					
Other:					
Outer gloves:					
Viton					
Rubber					
Neoprene					
Nitrile					
Other:					
Work gloves					
Safety boots (as per ANSI Z41)	X	X	X	X	X
Neoprene safety boots (as per ANSI Z41)					
Boot covers (type: _____)					
Hearing protection (type: _____)					
Hard hat – required when in the vicinity of heavy equipment in operation					
Face shield					
Other: Personal Flotation Device	X	X	X	X	
Other:					

8. HEALTH AND SAFETY MONITORING

Health and safety monitoring will be conducted to ensure proper selection of engineering/administrative controls, work practices, and/or PPE so that employees are not exposed to hazardous substances at levels that exceed permissible exposure/dose limits or published exposure levels. Health and safety monitoring will be conducted using the instruments, frequency, and action levels described in Table 8-1. Health and safety monitoring instruments shall have been appropriately calibrated and/or performance-checked prior to use.

9. DECONTAMINATION PROCEDURES

All equipment, materials, and personnel will be evaluated for contamination upon leaving the exclusion area. Equipment and materials will be decontaminated and/or disposed and personnel will be decontaminated, as necessary. Decontamination will be performed in the contamination reduction area or any designated area such that the exposure of uncontaminated employees, equipment, and materials will be minimized. Specific procedures are described below.

Equipment/Material Decontamination Procedures (specified by work plan): Any non-disposable sampling equipment will be washed in an alconox-water solution and double rinsed. Equipment will be wiped clean of dust and particulates prior to leaving the site.

Ventilation: All decontamination procedures will be conducted in a well-ventilated area.

Personnel Decontamination Procedures: Remove and dispose of PPE. Wash hands prior to taking breaks, such as lunch, and prior to leaving the site.

PPE Requirements for Personnel Performing Decontamination: Level D

Personnel Decontamination in General: Following appropriate decontamination procedures, all field personnel will wash their hands and face with soap and potable water. Personnel should shower at the end of each work shift.

Disposition of Disposable PPE: Used PPE and disposable sampling equipment will be double bagged in plastic trash bags and disposed of in a municipal refuse dumpster. These wastes are not considered hazardous and can be sent to a municipal landfill. Any PPE or dedicated equipment that is to be disposed of that can still be reused will be rendered inoperable before disposal.

Disposition of Decontamination Wastes (e.g., dry wastes, decontamination fluids, etc.): Decontamination fluids will consist of water with residual contaminants and/or non-phosphate detergent. These fluids will be allowed to infiltrate on-site well away from all surface water bodies or will be left at the site to evaporate.

TABLE 8-1

HEALTH AND SAFETY MONITORING

Instrument	Task Number	Contaminant(s)	Monitoring Location	Monitoring Frequency	Action Levels[a]	
☐ PID (e.g., RAE mini RAE) ☐ FID (e.g., OVA 128-) ☐ TVA 1000 or MultiRAE					**Unknown Vapors** Background to 1 ppm above background: Level D 1 to 5 ppm above background: Level C 5 to 500 ppm above background: Level B >500 ppm above background: Level A	**Contaminant-Specific**
Oxygen Meter/Explosimeter ☐ Multi RAE or VRAE					**Oxygen** <19.5% or >22.0%: Evacuate area; eliminate ignition sources; reassess conditions. 19.5 to 22.0%: Continue work in accordance with action levels for other instruments.	**Explosivity** ≤10% LEL: Continue work in accordance with action levels for other instruments; monitor continuously for combustible atmospheres. >10% LEL: Evacuate area; eliminate ignition sources; reassess conditions.
Radiation Alert Monitor (Rad-mini or RAM-4)					<0.1 mR/hr: Continue work in accordance with action levels for other instruments. ≥0.1 mR/hr: Evacuate area; reassess work plan and contact radiation safety specialist.	
Mini-Ram Particulate Monitors (Personal Data Ram and/or Data Ram)					**General/Unknown** Evaluate health and safety measures when dust levels exceed 2.5 milligrams per cubic meter. If dust levels exceed 5 mg/m^3, cease work until dust levels decrease or don respirator.	**Contaminant-Specific**
HCN/H_2S (Monitox)					≥4 ppm: Leave area and consult with SSO.	
Draeger Colorimetric Tubes					**Tube** **Action Level** **Action**	

TABLE 8-1

HEALTH AND SAFETY MONITORING

Instrument	Task Number	Contaminant(s)	Monitoring Location	Monitoring Frequency	Action Levels[a]
Air Monitor/Sampler Type: _____ Sampling medium: _____					**Action Level** **Action**
Personal Sampling Pump Type: _____ Sampling medium: _____					**Action Level** **Action**
Micro R Meter	1-3	Gamma Radiation	Throughout site	Initial walkthrough	<2 mR/hr: Continue work in accordance with action levels for other instruments. 2 to 5 mR/hr: In conjunction with a radiation safety specialist, continue work and perform stay-time calculations to ensure compliance with dose limits and ALARA policy. >5 mR/hr: Evacuate area to reassess work plan and evaluate options to maintain personnel exposures ALARA and within dose limits.
Ion Chamber					See micro R meter action levels above.
Radiation Survey Ratemeter/Scaler with External Detector(s)					**Detector** **Action Level** **Action**
Noise Dosimeter (Sound Level Meter)					≤85 decibels as measured using the A-weighed network (dBa): Use hearing protection if exposure will be sustained throughout work shift. >85 dBA: Use hearing protection. >120 dBA: Leave area and consult with safety personnel.
Other:					

10. EMERGENCY RESPONSE

This section contains additional information pertaining to on-site emergency response and does not duplicate pertinent emergency response information contained in earlier sections of this plan (e.g., site layout, monitoring equipment, etc.). Emergency response procedures will be rehearsed regularly, as applicable, during project activities.

10.1 EMERGENCY RESPONSIBILITIES

All Personnel: All personnel shall be alert to the possibility of an on-site emergency; report potential or actual emergency situations to the team leader and SSO; and notify appropriate emergency resources, as necessary.

Team Leader: The team leader will determine the emergency actions to be performed by E & E personnel and will direct these actions. The team leader also will ensure that applicable incidents are reported to appropriate E & E and client project personnel and government agencies.

SSO: The SSO will recommend health/safety and protective measures appropriate to the emergency.

Other:

10.2 LOCAL AND SITE RESOURCES (including phone numbers)

Ambulance: 911

Hospital: Fairchild Medical Center, 444 Bruce Street, Yreka, CA 96097 (530) 842-4121

Directions to Hospital (map attached at the end of this plan): Head southeast on Indian Creek Road. In 4.8 miles turns left onto Jacobs Way. In 0.4 miles turn left onto CA-96 E. Continue for 61.2 miles on CA-96 E then turn right onto CA263 S and continue for 8.1 miles. Continue onto Main Street and make a U-turn at W Howard Street. Arrive at Fairchild Medical Center.

Poison Control: California Poison Control System – San Francisco Division, UCSF Box 1369, San Francisco, CA 94143 (800) 222-1222

Police Department: 911 or Yreka Police Department, 412 West Miner Street, Yreka CA (530) 841-2300

Fire Department: 911

Client Contact: Chris Weden, EPA OSC (415) 971-6962

Site Contact: Chris Weden, EPA OSC (415) 971-6962

On-Site Telephone Number: To be determined.

Cellular Telephone Number: To be determined.

Radios Available: None.

Other:

10.3 E & E EMERGENCY CONTACTS

E & E Emergency Operations Center (24 Hours):	716-684-8060
Corporate Health and Safety Director, Dr. Paul Jonmaire:	716-684-8060 (office) 716-655-1260 (home)
Regional Office Contact: Cindy McLeod	510-893-6700 (office) 415-238-3379 (cell) 510-654-6250 (home)
Other: Sara Dwight	510-893-6700 (office) 415-264-8246 (cell)
a. E & E Emergency Response Center:	716-684-8060
b. Corporate Health and Safety Director, Dr. Paul Jonmaire:	716-684-8060 (office) 716-655-1260 (home)
c. Assistant Corporate Safety Director, Tom Siener, CIH:	716-684-8060 (office) 716-662-4740 (home) 716-597-5868 (Cell)

10.4 OTHER EMERGENCY RESPONSE PROCEDURES

On-Site Evacuation Signal/Alarm (must be audible and perceptible above ambient noise and light levels): 2 long blasts of vehicle horn.

On-Site Assembly Area: To be determined once on-site

Emergency Egress Route to Get Off Site: To be determined once on-site.

Off-Site Assembly Area: To be determined

Preferred Means of Reporting Emergencies: Call 911, notify E&E personnel and project manager, notify EPA OSC.

Site Security and Control: In an emergency situation, personnel will attempt to secure the affected area and control site access.

Spill Control Procedures: Spill response materials will be available onsite. Spills will be attended to and cleaned up as soon as possible using adsorbents, excavation, or other means.

Emergency Decontamination Procedures: Remove PPE.

PPE: Personnel will don appropriate PPE when responding to an emergency situation. The SSO and Section 7 of this plan will provide guidance regarding appropriate PPE.

Emergency Equipment: Appropriate emergency equipment is listed in Attachment 1. Adequate supplies of this equipment shall be maintained in the support area or other approved work location.

Incident Reporting Procedures: Notify authorities as appropriate. Notify E&E Regional Safety Coordinator as soon as possible and prepare an Incident /Exposure Report.

ATTACHMENT 1

EQUIPMENT/SUPPLIES CHECKLIST

	No.
INSTRUMENTATION	
FID	
Thermal desorber	
O_2/explosimeter w/cal. Kit	
Photovac tip	
PID (probe: _____eV)	
Magnetometer	
Pipe locator	
Weather station	
Draeger tube kit (tubes: _____)	
Brunton compass	
Real-time cyanide monitor	
Real-time H_2S monitor	
Heat stress monitor	
Noise equipment	
Personal sampling pumps and supplies	
MiniRam dust monitor	
Sample stands for PDR and air sampling	
Mercury monitor - Lumex	
Mercury monitor – Lumex soil attachment	
Innov-X	
GPS	X
Spare batteries (type: _____)	
RADIATION EQUIPMENT/SUPPLIES	
Documentation forms	
Portable ratemeter	
Scaler/ratemeter	
1" NaI gamma probe	
2" NaI gamma probe	
ZnS alpha probe	
GM pancake probe	
Tungsten-shielded GM probe	
Micro R meter	
Ion chamber	
Alert monitor	

	No.
Pocket dosimeter	
Dosimeter charger	
Radiation warning tape	
Radiation decon supplies	
Spare batteries (type: _____)	
TLD Badges	X
SAMPLING EQUIPMENT	
8-oz. jars	X
Half-gallon bottles	X
VOA bottles	
String	
Hand bailers	X
Thieving rods with bulbs	
Disposable Sampling Scoops	X
Knives	
Plastic bags	X
Sample cups (XRF)	
Coffee filters	
Sample labels	X
Mortar/Pestle	
Mylar film	
MISCELLANEOUS	
Pump	
Surveyor's tape	X
100' Fiberglass tape	
300' Nylon rope	
Nylon string	
Surveying/Sampling flags	
Spray Paint	
Camera	X

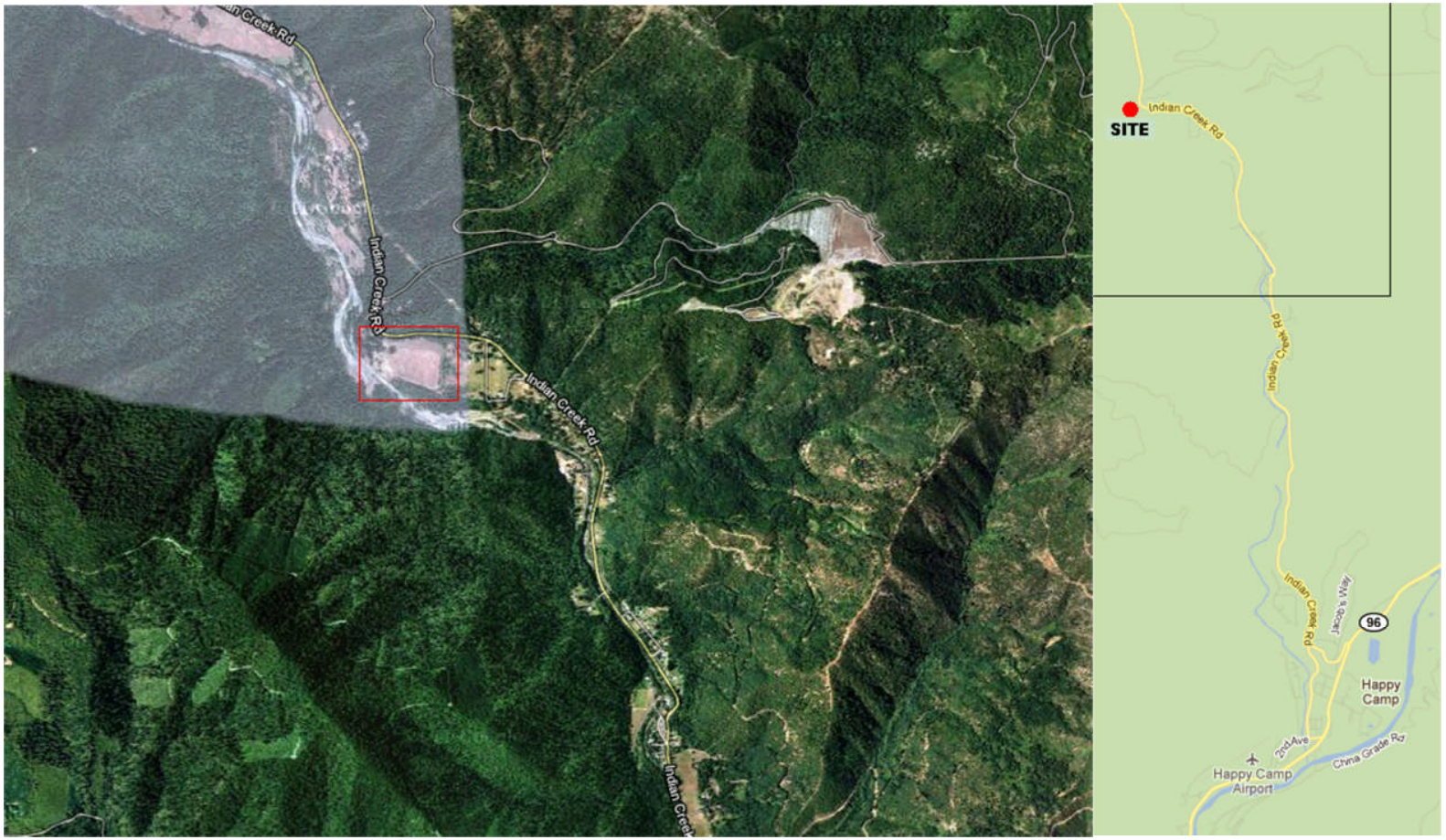
	No.
Film	
Bung wrench	
Soil auger	X
Pick	
Shovel	X
Catalytic heater	
Propane gas	
Banner tape	
Surveying meter stick	
Chaining pins and ring	
Logbooks (__1__ large, _____ small)	X
Required MSDSs	
Intrinsically safe flashlight	X
Potable water	X
Gatorade or equivalent	X
Tables	
Chairs	
Weather radio	
Two-way radios	
Binoculars	
Megaphone	
Cooling vest	
Sunscreen	X
EMERGENCY EQUIPMENT	
First aid kit	X
Stretcher	
Portable eye wash	
Blood pressure monitor	
Fire blanket	
Fire extinguisher	
Thermometer (medical)	
Spill kit	
Personal Flotation Device	X
DECONTAMINATION EQUIPMENT	
Wash tubs	
Buckets	X
Scrub brushes	X

	No.
Pressurized sprayer	
Spray bottle	X
Detergent (type: Alconox)	X
Solvent (type: _____)	
Plastic sheeting	
Tarps and poles	
Trash bags	X
Trash cans	
Masking tape	
Duct tape	X
Paper towels	X
Step ladders	
Distilled water	X
Deionized water	
SHIPPING EQUIPMENT	
Coolers	X
Paint cans with lids, 7 clips each	
Vermiculite	
Shipping labels	X
DOT labels:	
"Up"	
"Danger"	
"Inside Container Complies ..."	
Hazard Group	
Strapping tape	
Box cutter	
Custody seals	
Chain-of-custody forms	X
Express shipment forms	
Clear packing tape	X
Packing tape dispenser	
Permanent markers – thin	X
Permanent markers - thick	X
Ballpoint pens	X
Cable ties	X

	No.
PPE	
Tyvek L	
Tyvek XL	
Tyvek XXL	
Safety Vest	X
MSA Respirator	
MSA Cartridges – Combo	
Respirator wipes	
Hard Hat	
Steel Toed Boots	X
Safety glasses/sunglasses	X
Nitrile gloves – M	X
Nitrile gloves –X L	X
Latex Booties	
Waders	X
Personal Flotation Devices	X

Project # 002693.2151.01RA
TDD# TO-02-09-11-08-0001

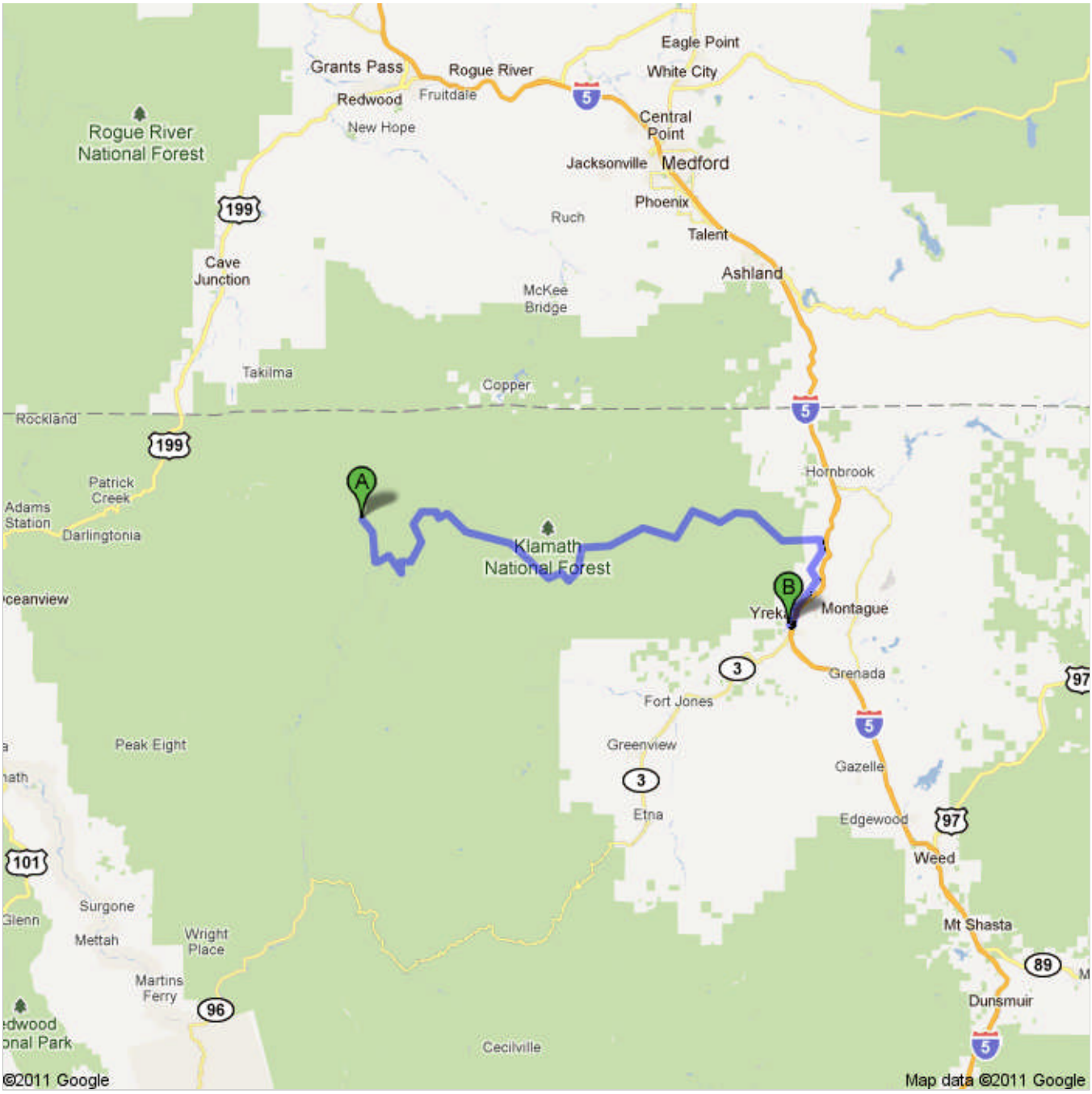
Source: Google Maps



Site Vicinity Map
Grey Eagle Mine
Siskiyou County, California

Google maps

Directions to Fairchild Medical Center
Yreka, California - (530) 842-4121
76.4 mi – about **1 hour 47 mins**

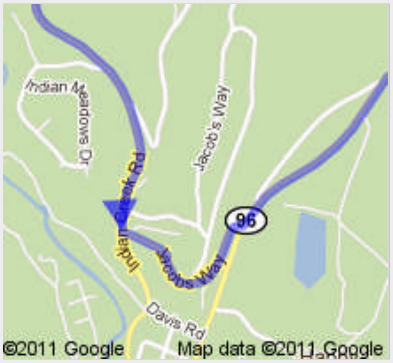


Indian Creek Rd

1. Head **southeast** on **Indian Creek Rd**
   About 8 mins

go 4.7 mi
total 4.7 mi

2. Turn left onto **Jacobs Way**
   About 1 min



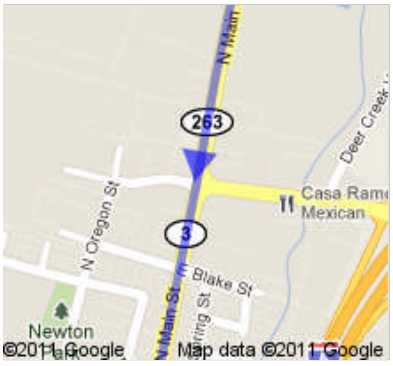
go 0.4 mi
total 5.2 mi

3. Turn left onto **CA-96 E**
   About 1 hour 23 mins

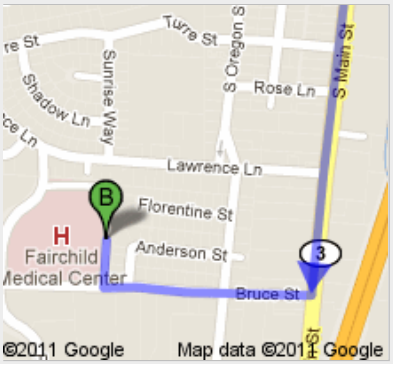
go 61.2 mi
total 66.4 mi

4. Turn right onto **CA-263 S**
   About 10 mins

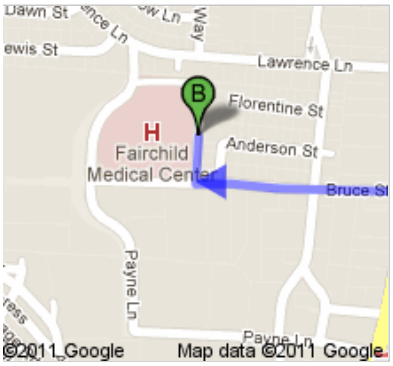
go 8.1 mi
total 74.5 mi



6. Turn right onto **Bruce St** — go 0.3 mi
About 1 min — total 76.3 mi



7. Turn right — go 318 ft
Destination will be on the left — total 76.4 mi



Fairchild Medical Center
Yreka, California - (530) 842-4121

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Map data ©2011 Google

Directions weren't right? Please find your route on maps.google.com and click "Report a problem" at the bottom left.